

PATENT
USSN 08/974,584
015389-002950US
018/206p2

REMARKS

This paper is responsive to the final Office Action dated November 23, 2005.

Claims 119, and 127 were previously pending in the application; claim 127 was withdrawn. Claim 119 is amended herein, and claims 128-131 are added. Claims 128-130 fall within the same group as claim 119, while claim 131 falls into the same group as claim 127. Accordingly, claims 119 and 127-131 are pending; claims 119 and 128-130 are under examination.

Entry of the new claims does not introduce new matter into the disclosure. Eighty percent identity is supported *inter alia* by original claim 15. Ninety five percent identity (claim 128) is supported *inter alia* on page 164 of the specification, lines 12-24.

Applicants acknowledge with gratitude withdrawal of rejections previously made under 35 USC § 112 ¶¶ 1 and 2; and § 102(a). Rejections have been maintained under 35 USC § 102(e) and for obviousness type double patenting.

Further consideration and allowance of the application is respectfully requested.

Interview summary

The undersigned wishes to thank Examiner Myers for the cordial and constructive interview held at the Patent Office on December 14, 2005. The Examiner recommended that a Declaration under 37 CFR § 1.132 be filed to overcome the rejection under § 102(e), and suggested that applicants proviso out the mouse telomerase sequence in order to address the double patenting rejection. Applicant's representative discussed the possibility of filing a CREATE Act style Terminal Disclaimer pursuant to 37 CFR § 1.321(d).

The amendments and remarks provided in this paper have been developed from what was discussed, and are believed to put the application in condition for allowance.

Double patenting

The claims under examination stand rejected for obviousness type double patenting over certain claims of U.S. Patent 6,767,719. The '719 patent discloses and claims nucleic acid sequences related to mouse telomerase reverse transcriptase.

Applicants respectfully submit that the claims as currently amended are not subject to obvious-type double patenting over the '719 patent.

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Claim 119 now explicitly provisos out all mouse TRT protein sequences that contain at least 500 consecutive amino acids of SEQ. ID NO:124 of this application. SEQ. ID NO:124 represents a preliminary sequence for a portion of the native mouse TRT cDNA, encoding the N-terminal 691 amino acids of the mouse TRT protein sequence. As shown in Appendix A accompanying this response, the encoding sequence is easily identifiable by the skilled reader as the longest open reading frame, being the only frame to encode a protein sequence of over 500 consecutive amino acids, or to include the telomerase "T" motif. Following the first unidentified amino acid residue at position 692, the encoding sequence diverges from the native mouse protein and incorporates a stop codon.

The proviso language is put into the claim on accordance with MPEP § 2173.05(i), which states: 'If alternative elements are *positively* recited in the specification, then they may be explicitly *excluded* in the claims: See *In re Johnson*, 558 F.2d 1008, 1019, 194 USPQ 187, 194 (CCPA 1977) ("[the] specification, having described the whole, necessarily described the part remaining."). General reference to TRT sequences of 500 amino acids in length is made in various places in the specification, such as page 8, line 30 and page 9, line 14. Page 14, lines 12-18 explicitly refer to portions or fragments of human TRT (SEQ. ID NO:118) ranging anywhere from 5 to 1100 amino acids in length.

Claim 119 as currently amended explicitly excludes all fragments of mouse telomerase reverse transcriptase protein having at least 500 consecutive amino acids encoded by SEQ. ID NO:124. Although SEQ. ID NO:124 does not contain the full length mouse TRT sequence, the full length sequence satisfies the characteristic required, and so is necessarily excluded. At least part of residues 192-450 are needed for activity of human TRT (U.S. Patent 6,337,200, Table 1), and mutation of the "T" motif can also remove activity (U.S. Patent 6,166,178, Example 16). Hence, any portion of the mouse TRT sequence lacking residues 190-460, or lacking residues 530-580 (covering the "T" motif) would presumably lack telomerase activity. This means that no fragment of native mouse TRT lacking 500 or more consecutive amino acids in SEQ. ID NO:124 would be expected to have telomerase activity.

Since claim 119 does not read on the full-length mouse TRT sequence or any functionally active fragment thereof, applicants respectfully submit that there is no double patenting of the amended claim with respect to the '719 patent.

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New claims 128 and 129 also do not read on the full-length mouse TRT sequence, because the mouse sequence is substantially less than 80% identical to full-length human TRT (Appendix B).

Withdrawal of the obviousness-type double patenting rejection of all claims with respect to U.S. Patent 6,767,719 is respectfully requested.

Rejection under 35 USC § 102(e):

The claims under examination stand rejected under § 102(e) as being anticipated by what is disclosed in U.S. Patent 6,093,809, which names different inventors.

Applicants respectfully disagree. Contrary to what is stated on Page 8 of the Office Action, claim 119 is entitled to the priority benefit of applications filed before November 19, 1997 that disclose both the human TRT sequence (SEQ. ID NO:118) and the motifs referred to in the claim.

Furthermore, as indicated previously, the human TRT sequence disclosed in the '809 patent is not an invention "by another", as required by § 102(e).

Enclosed with this Amendment is a Declaration under 37 CFR § 1.132 by Calvin Harley, one of the inventors named on the present application. Dr. Harley explains that the human TRT sequence described in the '809 patent was invented by the same inventors named here. However, the *Euplotes* sequence was deduced by Thomas Cech and Joachim Lingner.

The '809 patent issued from application 08/851,843, which originally included claims for human TRT, and named the same inventors. When the claims were amended in the 08/851,843 application to cover only the *Euplotes* sequence, the application was amended to name Drs. Cech and Lingner as the inventive entity.

Thus, the relevant information disclosed in the cited patent does not qualify as prior art under 35 USC § 102(e). Withdrawal of this rejection is respectfully requested.

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Request for Rejoinder:

Claim 127 is a method claim that depends from and incorporates the limitations of product claim 119. It was presented before any of the claims in this application had been examined in the merits. Claim 131 is a method claim that depends from and incorporates the limitations of product claim 129.

Applicants hereby renew their request that the withdrawn claims be rejoined into the group under examination, upon determination that the product claims are patentable, in accordance with MPEP § 821.04.

Other telomerase applications

As the Examiner is aware, there are other issued and pending application relating to sequences for telomerase reverse transcriptase. Pursuant to 37 CFR § 1.56, Appendix C is provided with this response listing some such telomerase patents and applications.

Enclosed herewith is an Information Disclosure Statement, including certain patents referred to in this Response, and patents for TRT owned or co-owned by Geron Corp. that have issued since the last Information Disclosure Statement. The Examiner is requested to make them of record in this application.

Request for Interview

Applicants respectfully request that all outstanding rejections be reconsidered and withdrawn. The application is believed to be in condition for allowance, and a prompt Notice of Allowance is requested.

In the event that the Examiner determines that there are other matters to be addressed, applicants hereby request an interview by telephone.

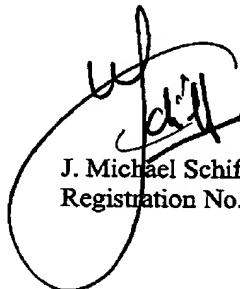
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Fees Due

Enclosed with this Amendment is authorization to charge the Deposit Account for the Request for Continued Examination, and for the extension of time.

Should the Patent Office determine that a further extension of time or any other relief is required for further consideration of this application, applicants hereby petition for such relief, and authorize the Commissioner to charge the cost of such petitions and other fees due in connection with the filing of these papers to Deposit Account No. 07-1139, referencing the docket number indicated above.

Respectfully submitted,



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